

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
28 April 2005 (28.04.2005)

PCT

(10) International Publication Number  
**WO 2005/037857 A3**

(51) International Patent Classification<sup>7</sup>: G01N 24/00, (74) Agents: MYERS, Richard, Jr. et al.; 424 Church Street, 33/00 Suite 1800, Nashville, TN 37219 (US).

(21) International Application Number:  
PCT/US2004/033951

(22) International Filing Date: 14 October 2004 (14.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/511,484 15 October 2003 (15.10.2003) US  
60/574,412 26 May 2004 (26.05.2004) US

(71) Applicant (for all designated States except US): VANDERBILT UNIVERSITY [US/US]; 305 Kirkland Hall, Nashville, TN 37240 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PORTER, Ned, A. [US/US]; 1003 Scramblers Knob, Franklin, TN 37069 (US). MASTERSON, Douglas, S. [US/US]; 111 Mountain High Drive, Antioch, TN 37013 (US). YIN, Huiyong [CN/US]; 2011 Richard Jones Road, Apt. Q3, Nashville, TN 37215 (US). CAPRIOLI, Richard, M. [US/US]; 5020 High Valley Drive, Brentwood, TN 37027 (US). NORRIS, Jeremy, L. [US/US]; 318 Sharp Springs Road, Smyrna, TN 37167 (US). CHACON, Almaly [VE/US]; 1312 CC Road, Kingston Springs, TN 37082 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:  
16 June 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/037857 A3

(54) Title: METHOD OF PROTEIN ANALYSIS BY MALDI USING PROTEIN FRAGMENTATION WITH PEROXYCARBONATES

(57) Abstract: A method of identifying protein sequences by mass spectrometry, MALDI in particular, using protein fragmentation with peroxycarbonates is disclosed. The analysis is performed directly from a mixture of the protein and peroxycarbonate solutions. Specific peroxycarbonates are also disclosed.